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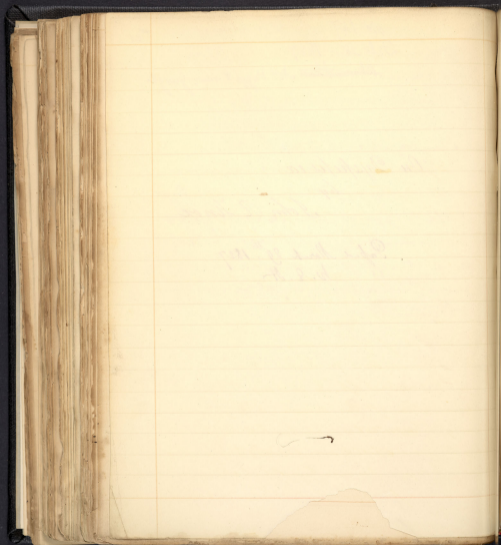
~~Almon Almon~~ Mr. Pigg & man George

On Dyspepsia

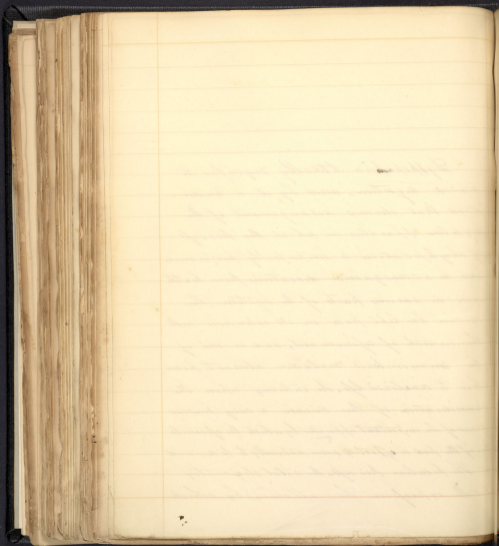
by

John R. Knox

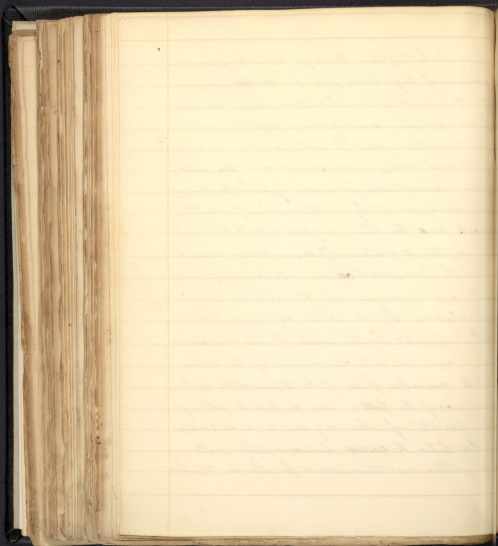
Paper March 29th 1827
W. & A.



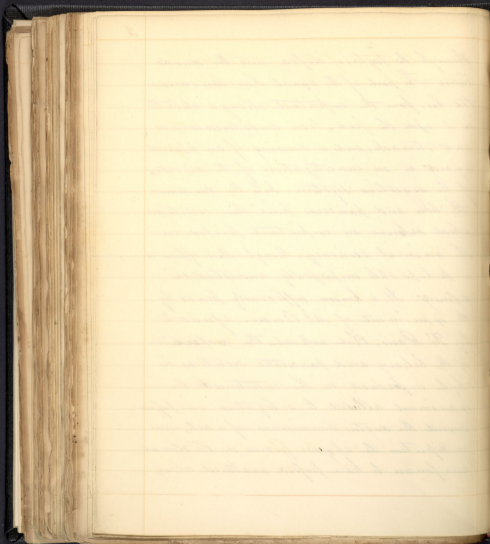
Dyspepsia literally signifies dis-
pepsia digestion, and by it is under-
stood that chronic derangement of the
digestive apparatus in which the process
of digestion is imperfectly performed,
and as a consequence deviations from health
arise in various parts of the system. This
disease has kept pace in its extension with
the march of refinement, and is one of
the unnumbered maladies almost pecu-
liar to civilized life. In entering upon the
consideration of the disease a very necessary
view of the important apparatus by which the assimila-
tion of the food is effected seems naturally to be assumed.
The peculiar process the vital chemistry
(if the expression be allowed) by which



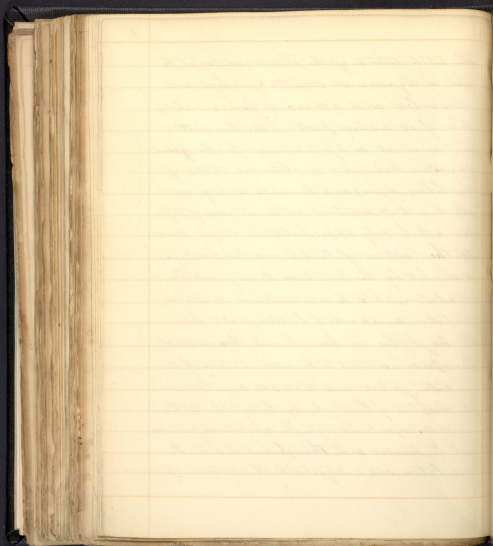
the aliment passes through the successive stages of digestion, from the crude mass to its perfect amalgamation, must perhaps forever remain among those mysteries from which nature refuses to withdraw the impenetrable veil, which she conceals her ultimate operations from our eyes. Without examining minutely the structure of the stomach and the other organs associated with it, in the digestive office, we may remark that the food, masticated and saturated with saliva, is received into the alimentary canal, where by the action of the gastric fluid secreted by the vessels of this organ it is converted into chyme. By the action of the muscular fibres of the stomach the different portions of the food are pulled along the parietes of this organ in a manner calculated to ~~increase~~ ^{facilitate} the commotion with the gastric secretion, and finally are expelled



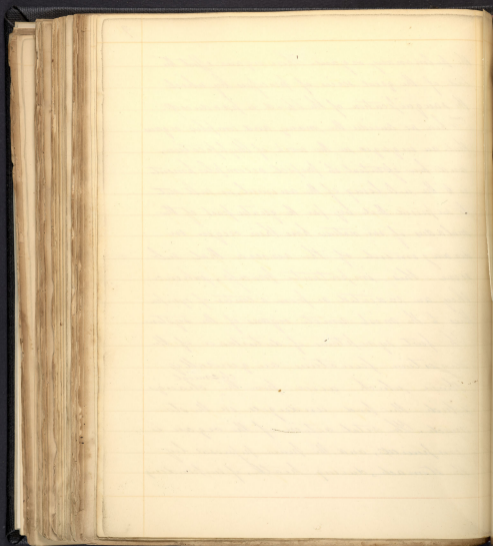
through the pyloric orifice into the duodenum. The part of the canal thus denominated has, from the important changes operated in it upon the food, been considered as a second stomach, and is deserving of an especial regard in an investigation of the disorders of the digestive system. Into the duodenum the liver and pancreas pour their secretions which subserve an important purpose in the animal economy, though their office is perhaps still imperfectly understood or defined. It is however sufficiently proved by the experiment of Mr. Brown, referred to by Dr. Paris, that without the cooperation of the biliary and pancreatic secretions no chyle is formed in the intestines. In the experiment alluded to a ligature was passed around the duodenum communis of a cat, and on dissection the chyme formed in the stomach was found to have proper nature along



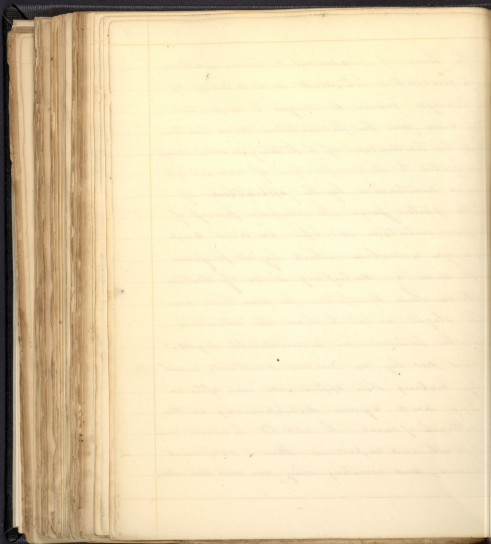
the whole extent of the intestinal canal, except as regards its consistency, which was more solid as it advanced from an absorption of its watery parts. With this fact in view we are at length able to account for the great emaciation that occurs in obstructed states of the biliary organs; and the importance of an attention to its secretions in the disorders of digestion will be duly appreciated. The chyle formed by the action of the bile and pancreatic juice is absorbed by the lacteals on its way into the circulation, while the mucimentitious matter is propelled downwards to be eliminated from the body. Thus we have observed three distinct processes subservient to the assimilation of the food—the gastric and duodenal digestions, and the absorption of the chyle by the splanchnic ducts for its conveyance through the mesenteric glands into the hepatic duct, through which it enters the circulation and is subjected to the operation of



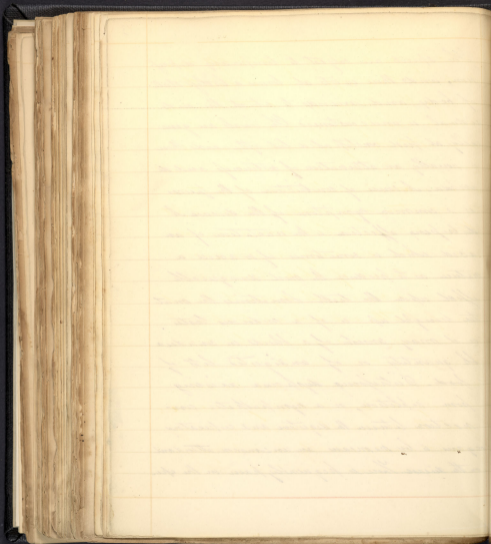
the pulmonary organs. These organs effect the last of the great series of processes by which the sanguification of the blood is produced. When we consider the many and complex organs that are engaged in the work of oxygenation, and how essential its perfect accomplishment is to the well being of the animal, we will not be surprised that by far the greater part of the maladies of our nature have their origin in derangement of the viscera that subserve this important process, whence they are radiated as from a centre of sympathies to the most remote organs of the system. The first symptoms of disturbance of the digestive functions are generally those which arise from the ^{chemical} changes which the food undergoes in the stomach. The vital action of the organ is suspended, and the power possessed by the stomach, during health, of suspending



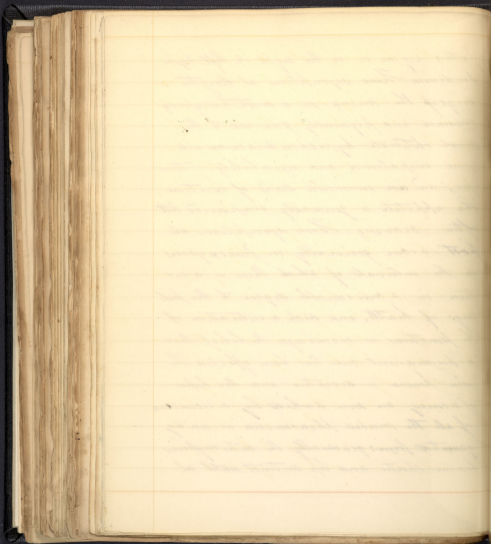
The laws of chemical action within
 is present a lot, and such a series of
 changes occur as might be expected
 to arise from the fermentation and putre-
 factive tendencies of a heterogeneous mass
 subjected to the temperature of animal life
 and maintained by the ~~operation~~ presence of
 the gastric juice. The common process of
 fermentation develops an acid and
 a gas is evolved which by its pressure
 produces a distressing sense of disten-
 tion. These symptoms for some time are
 so slight as not to draw the attention
 of the patient in a considerable degree,
 and are by no means constant, usual-
 ly making their appearance soon after ea-
 ting and again disappearing in the
 interval of meals. The appetite becomes mor-
 bonable and capricious. There is occasional
 nausea, and vomiting may now and then occur.



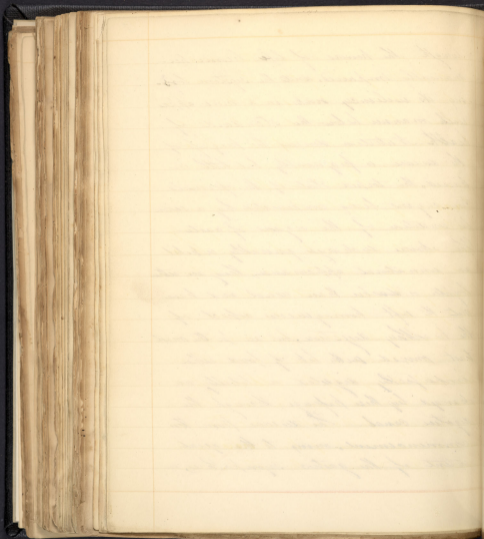
The spirits are subject to temporary depression, and there exists at times a listless state of body and mind to which the individual is unaccustomed. The bowels are generally at first constipated but afterwards there is usually an attenuation of excrements and diarrhoea. A sense of constriction of the præcordia is a common symptom of the disease. A depressing affection is the excretion of an acid which is sometimes of a soiled a nature as to produce the most disagreeable effect upon the teeth. Sometimes the matter brought up is of a milky taste, or it may consist of a fluid in considerable quantities or of undigested bits of food. Distressing dyspnoea arising from depletion, or a sympathetic connection between the digestive and respiratory organs is by no means an uncommon attendant on the disease. There is frequently pain in the epigastrium.



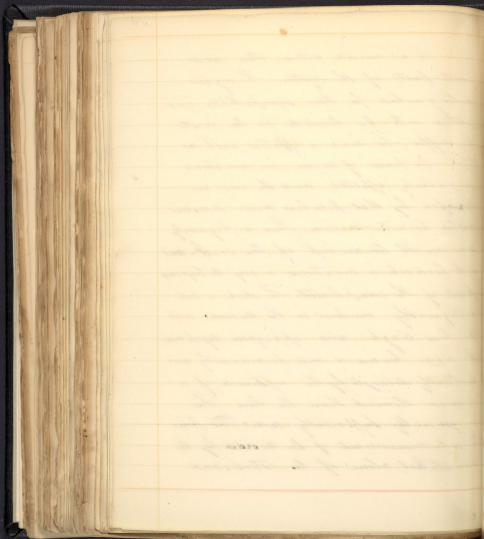
gastric region or in the right or left hypochondrium. These symptoms at length engrip the mind in a most harassing manner, and frequently give rise to the most obstinate hypochondriacism with great impatience and irascibility of temper, and an invincible dread of operation. The appetite is generally impaired but often craving. These symptoms at first occur generally in paroxysms in the intervals of which there is a return in a considerable degree to the feelings of health, and such a restoration of the functions as encourages the belief that a permanent cure has been effected. The calm however is deceptive and the hopes of recovery are soon dashed by a recurrence of all the marked phenomena in an aggravated form: gradually the entire system becomes shaken and lies at rest until at



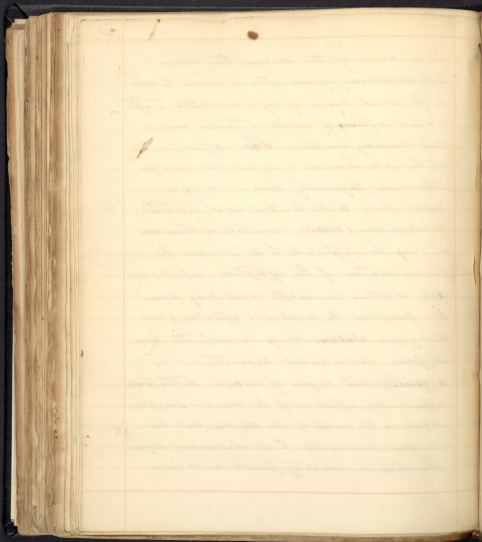
length the powers of life become permanently impaired, and the system losing its elasticity sinks in a more appreciable measure below the standard of health. Nutrition during the progress of the disease is frequently but little impaired, the torpid state of the assimilative organs being compensated by a similar condition of the organs of waste. The stools discharge generally exhibit an unnatural appearance, they are either lighter or darker than usual and have not the soft homogeneous aspect of the healthy secretion, but are for the most part mixed with bits of food either imperfectly digested or totally unchanged by their passage through the digestive canal. The disease from the commencement, owing to the great extent of the gastric sympathy, in



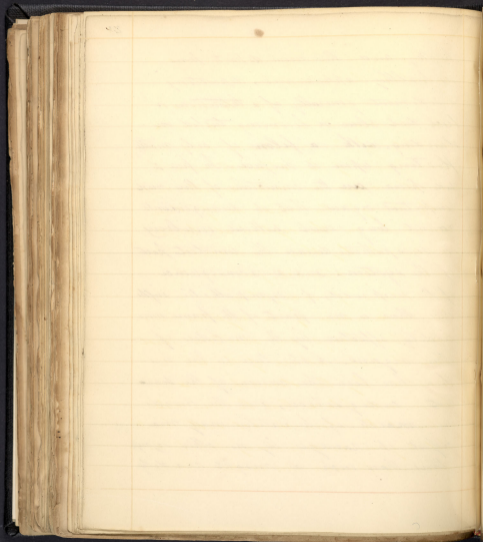
values in a morbid action other and
 remote parts of the system. The organs
 distinguished by their sympathetic asso-
 ciation with the stomach are the first
 to suffer. The head is affected with sei-
 zings - the power of vision is sometimes
 sensibly affected, and the ears are
 tormented by that peculiar noise termed
matra tonitrua aurium. There is frequently
 considerable tenderness of the scalp, and
 side headache is sometimes a very distressing
 part of the complaint. The skull is not
 unfrequently involved in the disease and
 we have cough and oppression of the
 lungs. However is more humanely and
 constantly deranged by the influence of a
 diseased stomach than the liver. This
 is generally happily indicated from
 the commencement of the disorder by the
 unnatural colour of the stools, and



in the course of the disease the right
 hypochondriac region, after exposure to cold
 or the usual causes of inflammation, ^{sometimes} is affec-
 ted with a feeling of weight or tension and a
 dull uneasy sensation. The affection
 of the side however is equivoval, and per-
 haps more frequently than is imagined
 arises from a distended and irritated
 duodenum; under some circumstances
 it may be difficult to determine the
 precise nature of the affection, but it occurs
 several distinct periods after meals may some-
 times point out the duodenal affection; and
 the organic disease may be suspected from
 its more permanent character, and by
 a considerable degree of vascular disturbance.
 Spasmodic affection of the muscles sometimes
 occurs in the course of the disease, and has
 in some cases existed to an alarming degree.
 The skin is usually harsh and even

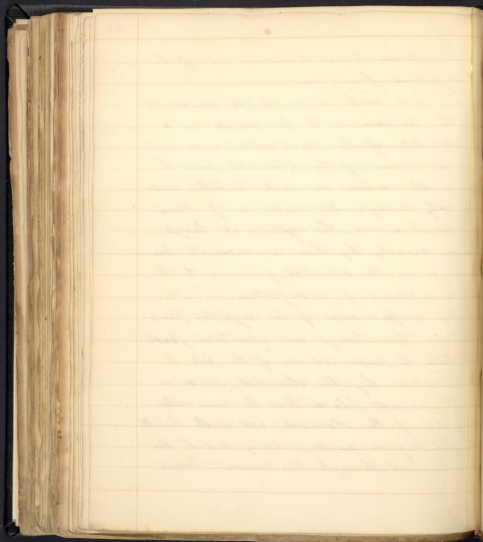


husky and the vein departs from its healthy appearance, depositing a sediment generally of a tawny or brick dust color, or becoming thickened and standing, with a ~~film~~ of oily matter floating upon its surface. In fine & sub-species ~~are~~ the connections of this most important organ, that its disarrangements cannot long exist without involving in sympathetic disease the remotest parts of the system: and, as a consequence of the incapacity of sympathetic influence, there is no part of the frame more readily affected by the malices of other organs. A stricture in the urethra has been the cause of the secret indigestion, and the insidious march of hepatitis may manifest its ravages by no other symptoms than such as might readily

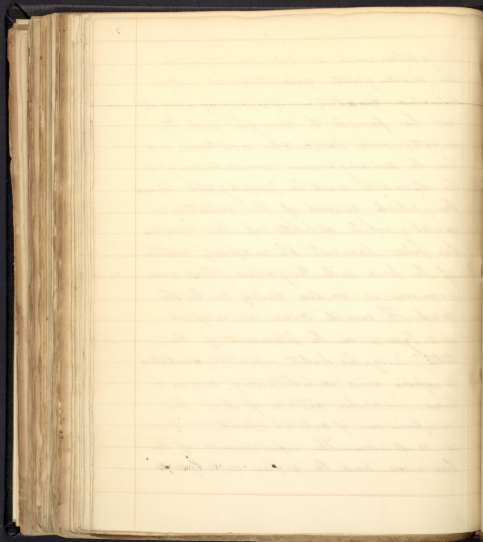


be referred to a derangement of the digestive functions.

The immediate cause of the disease is to be found in a debility of the muscular and nervous force of the stomach, and the remote causes are such as, either indirectly through the medium of their operation on the system at large, or directly by their immediate presence on the stomach, give rise to the symptoms of indigestion. For a perfect performance of the digestive function two things are essential—first that the proper action of the food be exerted by the stomach, and in the second place that the muscular fibres of the stomach act with healthy vigour and properly propel the aliment through the viscera. (Where

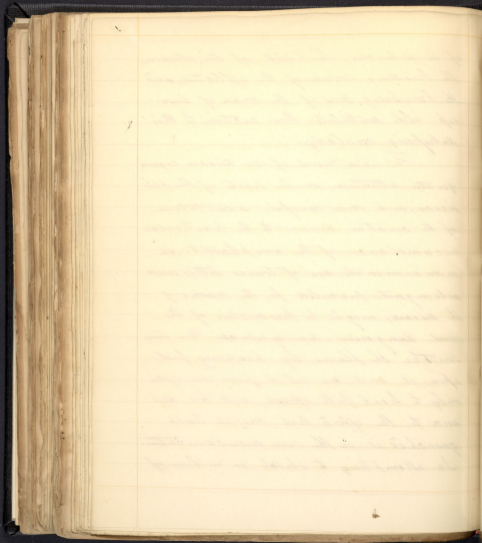


The gastric juice is secreted either in
 an inadequate quantity, or of a
 vitiated quality, a proper rhythm will
 not be formed to mingle with the
 hepatic and pancreatic secretions, and
 thus the arrangement commencing in
 the stomach will be propagated through
 the whole extent of the intestinal
 canal; while debility of the muscular
 fibres prevents the necessary mixture
 of the food with the gastric fluid and
 occasions an undue delay in the sto-
 mach. The remote causes are excessive
 indulgence in the pleasures of the
 table, irregular habits, sedentary occupations
 excessive and debilitating macer-
 ations, improper articles of diet, the
 excessive use of ardent spirits, of tobacco
 or opium. The refinements of the
 luxurious and the proper indulgence

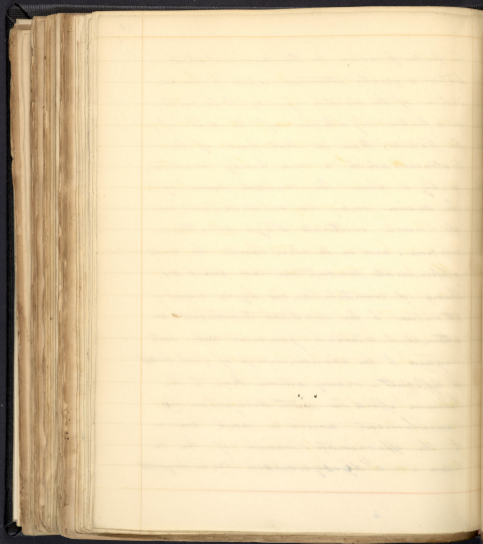


of the delirious, the habit of the studious,
the brooding sorrow of the afflicted, and
the harassing care of the man of business
all contribute their victims to this
deceptive malady.

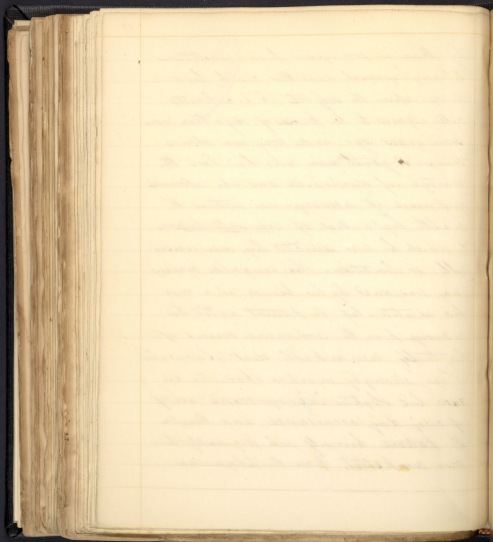
The treatment of no disease requires
greater attention on the part of the phy-
sician, or a more careful adaptation
of the curative means to the particular
circumstances of the complaint. An
indiscriminate use of tonics, bitter and
astiringents, prescribed for the name of
the disease, might be productive of the
most dangerous consequences. We thus
smother the flame by heaping fuel
upon it and conceal it from our eyes,
only to heat forth afresh and bid adieu
to the efforts that might have
quenched it in the commencement.
In attempting to sketch an outline of



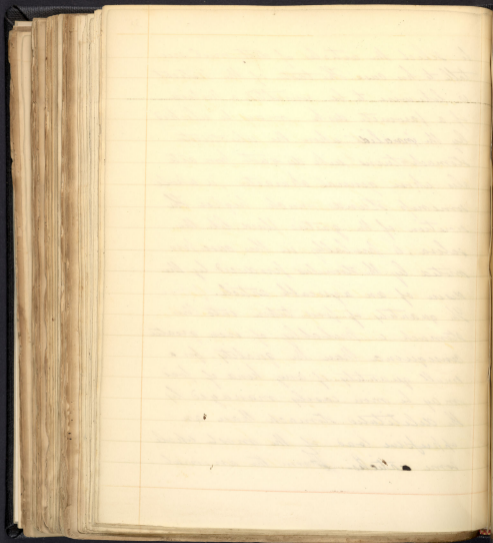
In proper practice in the disease I shall
 bestow a greater attention upon a consid-
 eration of the curative agency to be found
 in a proper regulation of the diet of
 the patient, than in that part of the
 treatment which is more purely medical,
 as by it alone the mildest forms of
 the disease may be subdued, and even
 its most obstinate stages sometimes
 overcome: and on the other hand the more
 appropriate prescription can arise on
 thing of counterbalancing by a want of
 attention to the dietetic treatment, an
 attempt to establish general rules with
 regard to the advisableness of food must
 be difficult - many articles that to the
 labourer afford the most strengthening
 nourishment would be rank poison
 to the effeminate stomach of the ci-
 tizen - I therefore advise more frequent



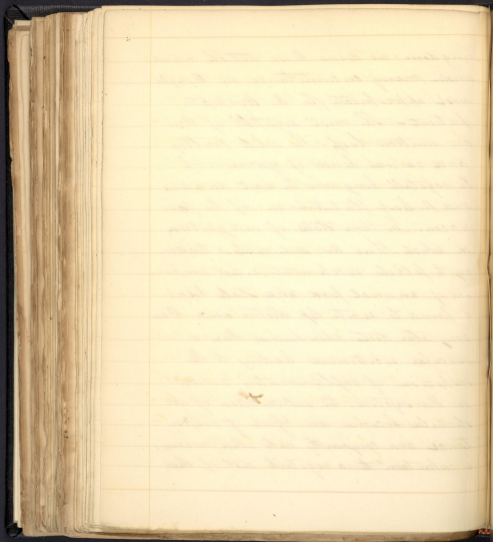
ly than is imagined from exceptions
 to any general rules that can be laid
 down upon the subject. A peculiarity
 with regards to the powers of digestion some
 years ago under my own observa-
 tion, a gentleman who had been the
 martyr of dyspepsia and who almost
 despaired of recovery, was restored to
 health by a diet of raw salt lagoon
 to which he was directed by an irresist-
 ible inclination. This singular craving
 was considered by his friends as a mor-
 bid appetite - but the patient dated his
 recovery from the commencement of
 his truly remarkable diet. A number
 of his strongly marked characters are
 rare but slighter idiosyncrasies are of
 every day occurrence, and therefore
 the patient himself is frequently be-
 come competent than the physician



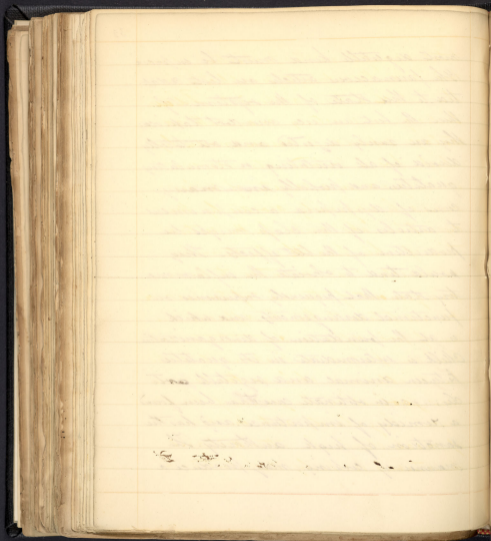
to select the articles of diet most suitable to his case. The taste of the patient is likewise to be consulted, a portion of a favourite dish may be relished by the invalid when the reluctant stomach turns with disgust from articles whose general character for whole some ness stands much higher. The secretion of the gastric fluid, like the salivary, is probably in this case promoted by the stimulus produced by the vision of an agreeable article. If so the quantity of food taken into the stomach is probably of more consequence than the quality. for a small quantity of any kind of food may be more easily managed by the debilitated stomach than an oppressive load of the most whole some articles. Form the animal



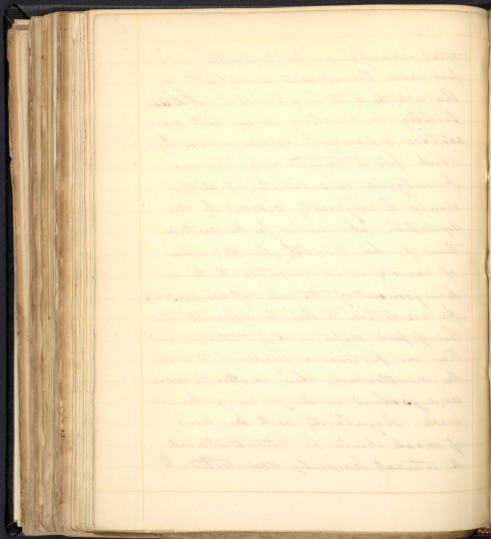
kingdom we derive those articles which under many circumstances are thought most appropriate for the dyspeptic patient - The most digestible of these are mutton beef, the white poultry and various kinds of game - Of the vegetable kingdom the best vegetables are the hard starchy or of the farinacea. In those states of indigestion in which there does not exist a tendency to febrile excitement, a diet composed of animal food and stale bread is found to excite less disturbance than any other diet - when however there is vascular excitement leading to the suspicion of inflammatory action in the system, the subtraction of all stimulus becomes an object of importance and consequently with other means, a reduction to a vegetable diet of the



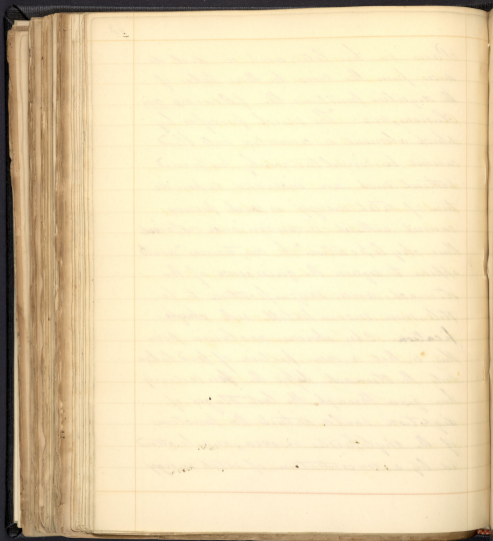
most digestible kind must be im-
 pte farinaceous articles are best adap-
 ted to this state of the system. Of
 these the best are rice, arrow-root, tapioca;
 they are easily digested and are totally
 devoid of all irritating or stimulatory
 qualities, and probably ~~are~~ many
 cases of dyspepsia a consequent
 to articles of this class might be
 productive of the best effects. They
 would tend to abate the inflamma-
 tory state that frequently supervenes on
 functional derangements, and which
 is at the foundation of disorganization.
 Milk is intermediate in its qualities
 between animal and vegetable arti-
 cles; and in obstinate cases has been found
 a remedy of importance, and has the
 sanction of high authority. The
 manner of cooking may produce a



total change in the properties of our food, and the utmost simplicity in this respect is to be adhered to. ~~Idleness~~ Boiling or roasting may with advantage supersede the various modes by which food is tortured into poison. Indulgence in a variety of dishes should be religiously avoided by the dyspeptic who wishes for the restoration of his health; the stimulus of variety is an incentive to the infringement of the rules of temperance. In addition to this the different species of food differ in digestibility, and thus one portion is prepared to enter the duodenum while another remains undigested in the juices of the stomach. Regularity as to the hour of meals should be attended to, and the intervals properly distributed - D.



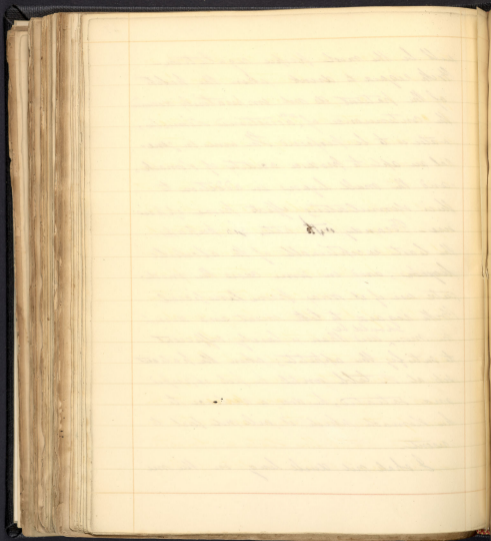
Paris in his late work on diet deduces from the views he there takes of the digestive functions the following conclusions, viz: "The several processes by which aliment is converted into blood cannot be simultaneously performed without such an increase or expenditure of vital energy as weak persons cannot without inconvenience sustain. Thus chylification" he continues "seems to require the quiescence of the stomach and sanguification to be still more incompatible with chylification. An obvious conclusion from this is, that a new portion of food taken into the stomach before the preceding has gone through the last stages of digestion would disturb the functions of the chylificative viscera, and be attended by a concentration of vital energy



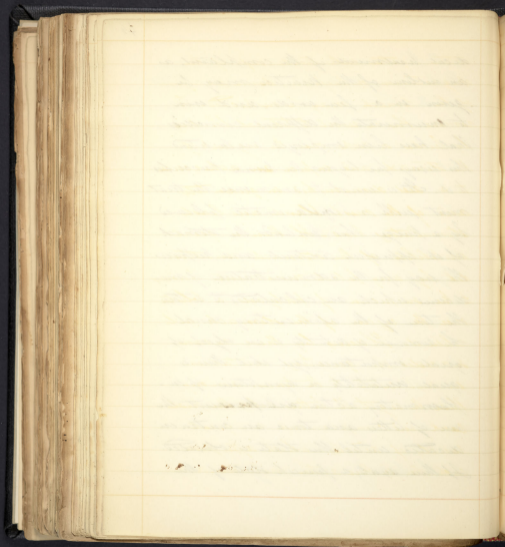
around them again that would not be
 rid of the system of ob. due proportion:
 but notwithstanding the plausibility of
 this reasoning that rules founded upon
 it are not without exceptions and it
 is found that the best plan under many
 circumstances is to administer food in
 small quantities and at short intervals.
 With some dyspeptics and particular-
 ly with the debilitated, the usual in-
 tervals cannot be borne without the most
 distressing sensation of sinking and
 weakness, and here the best effects are
 to be expected from ~~never~~ suffering the
 stomach to be perfectly empty. Under
 circumstances of comparative strength,
 when the stomach is capable of receiving
 at one a considerable quantity of food,
 a very limited number of meals dur-
 ing the day, three or at most four,

will be the most proper regulation—
 With regard to drink when the habits
 of the patient do not comparatively demand
 the continuance of ^{any} accustomed stimulus,
 water is to be preferred. The wines in gene-
 ral are apt to produce acidity of stomach,
 and the small liquors in addition to
 their stimulating effect prove oppres-
 sive—Brandy ~~with~~ water is perhaps
 the least exceptionable of the alcoholic
 liquors, and in some cases the moder-
 ate use of it may prove beneficial.
 With regard to both meat and drink
 no more ^{should be} used than is barely sufficient
 to satisfy the appetite; when the patient
 sub al the table would be felt oppressed
 and satiated, he does a violence to
 his stomach which it will not fail to
 resent.

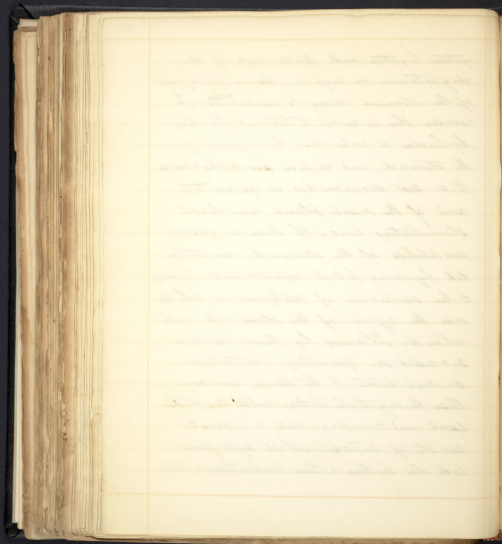
I shall not dwell long on the me-



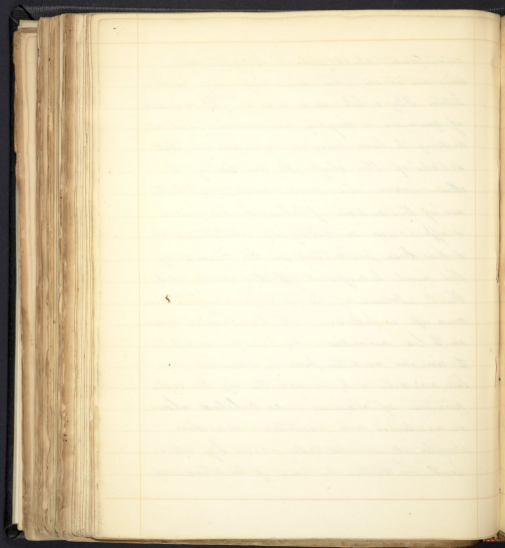
detail treatment of the complaint, as
 an outline of the practice may be
 given in a few words, and even
 to enumerate the different remedies
 that have been employed would extend
 this essay far beyond the bounds prescribed
 to it. It is now to announce the treat-
 ment with a purgative emetic followed
 by a purge - this unloads the stomach
 of its offensive contents and prepares
 the way for the administration of me-
 dicines which are calculated to restore
 the tone of the alimentary canal.
 The removal of acidity is an object of
 great importance, yet while there is
 great irritability or symptoms of in-
 flammatory action ~~dis~~ prevent the
 use of bitter and tonic as contrain-
 dicated until this state is obviated.
 If there exist a febrile state of the



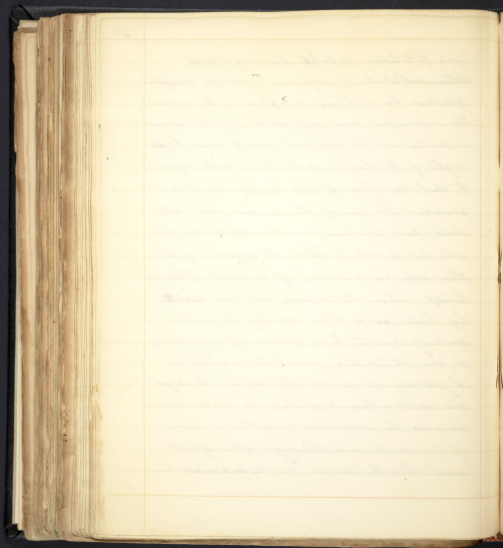
system together with tenderness of the
 epigastrium on pressure, some phlegmosis
 of the stomach may be suspected. To
 remove this is resort to topical bleeding
 by leeches or cups over the region of
 the stomach, and to use an adherence
 to a diet diminished in quantity
 and of the most bland and least
 stimulating kind. If there is great
 irritability of the stomach unatten-
 ded by any febrile movement leading
 to the suspicion of phlegmosis, a blister
 over the region of the stomach will
 relieve it. Flaming by these means
 succeeded in quieting irritations
 in next resort to the tonic, among
 these the vegetable latter hold the first
 rank and comprehend a great
 variety of articles - which differ from
 each other in their active properties, a re-



circumstances which should be taken into
 consideration in directing the exhi-
 bition. By a late and popular ^{writer} the sulphate
 of quinine is highly commended and ac-
 cording to him might supersede the other
 articles of this class. As auxiliary to
 other means the same writer holds the
 use of the nitrate of silver, he has found
 it efficacious in allaying irritation, and
 it has been productive in his hands of
 the most beneficial effect. So the whole
 the treatment of the disease may be sum-
 med up as follows. The occasional access
 are to be avoided - mucus are expelled
 to remove mucus from the stomach - mor-
 bid acidity is to be corrected by the inter-
 position of alkalis & exhibited alone
 or combined with laxatives - diarrhoea
 should it accidentally occur by abor-
 dents. To restore the tone of the stomach



and sometimes exhibit the vegetable
 bitter, sulphate of quinine, which quaffer
 gentian &c. — tonic combined with aroma-
 tics — pure air and exercise are of the utmost
 importance. The patient must never hope
 to get of the proper restrictions with regard
 to diet. excesses of all kinds must be
 avoided. The use of the razor and cold
 baths and friction over the whole surface
 and particularly over the region of the
 stomach are remedies of a great efficacious
 kind — when the disease has been excited
 by heat, as is kept up by hepatic
 derangements, the exhibition of mercury
 as an alternative must be resorted to.
 A journey of considerable extent through
 an interesting country in a residence
 during the summer months at some
 of the medicinal springs often effect
 cures when the disease has remained in



tractable under all the usual remedies, and the skill of the physician has been exhausted in vain.

